

Mineral Industry Surveys

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LEAD IN JANUARY 1998

Mine production, based upon the net quantity of lead recovered in the smelting of concentrate, increased by 11% from the previous month but was down by about 1% compared with production in January 1997. Primary refinery production increased by 2% from December 1997 and was up by about 1% compared with production in January 1997. Secondary refinery production increased by about 4% from last month and was up by about 8% compared with production in January 1997. Reported consumption remained essentially unchanged in January.

According to *Platt's Metals Week* published quotations, the average North American producer price moved downward for the fourth consecutive month, showing a slight decline of about 0.1%, while the London Metal Exchange (LME) cash price moved upward by about 1.0%. According to industry analysts, the U.S. market for lead remains fairly tight, but has been softened somewhat by the decrease in demand for replacement batteries as a result of the relatively mild winter (American Metal Market, 1998). In the European market, analysts see a very tenuous supply-demand balance that could be challenged should an appreciable increase in demand occur (Platt's Metals Week, 1998).

National Defense Stockpile cash disposal (sale) of lead in January was 3,835 metric tons (4,228 short tons). Sale of lead to date in fiscal year 1998 (October 1997 through January 1998) was 24,246 metric tons (26,727 short tons).

The U.S. Consumer Product Safety Commission recently issued a document providing guidance to manufacturers, importers, distributors, and retailers to protect children from hazardous exposure to lead in consumer products. This guidance, not a rule, was intended to highlight certain industry obligations issued under the Federal Hazardous Substances Act (FHSA). Under the FHSA, household products that expose children to hazardous quantities of lead in reasonably foreseeable conditions of handling or use are classified as "hazardous substances." In evaluating the potential hazard associated with products that contain lead, the Commission considers several major factors on a case-by-case basis. These factors include the total amount of lead contained in the product, the bioavailability of the lead, the accessibility of the lead to children, the age and foreseeable behavior of the children exposed to the product, the foreseeable duration of the exposure, and the marketing, patterns

of use, and life cycle of the product. In its guidance document, the Commission urged manufacturers to eliminate lead in consumer products. However, in cases where lead is used, the manufacturer was encouraged to perform the necessary analysis before distribution of the product to determine whether the product is a "hazardous substance." By conducting such analysis to establish that it is not a "hazardous substance," the manufacturer could avoid future action by the Commission that might ban the product or require that it contain a warning label (U.S. Consumer Product Safety Commission, 1998).

Canada's Anvil Range Mining Corp. closed its Faro zinc-lead mine, Yukon Territory, in mid-January, citing falling metal prices. A company spokesperson stated that cash resources had been "substantially depleted" since mining was resumed in November 1997. At that time, Anvil had secured sufficient short-term financing from Canada's Cominco Ltd. and Switzerland's Glencore International to restart the mine. As part of the agreement, Glencore had gained the rights to market all of the zinc and lead concentrates produced at Faro until March 1998. A successful test period was completed on the mill in early November with concentrate grades reaching target levels of 61% for lead and 51% for zinc. During the latter part of November, metal recoveries were close to the target levels of 77% for lead and 73% for zinc. As a result of Anvil's current cash resource situation, the company has sought court protection under Canada's Companies Creditors Arrangement Act and has begun the process of formulating a restructuring plan with its shareholders (Metal Bulletin, 1998a).

Minco Mining and Metals Corp., Vancouver, Canada, signed cooperative agreements with Chinese base metals producer Baiyin Non-Ferrous Metals to develop two base metal projects in China's Gansu Province. In the first agreement, Minco can gain a 75% interest in the Changba-Lijiagou zinc-lead property through the development of a 3,500-ton-per-day underground mining operation. This property encompasses three deposits including Lijiagou, Changba, and an unnamed "joint area." Resources at Lijiagou are reported to be 13.5 million tons at a grade of 11% zinc and 1.9% lead. Resources and grades for each of the other two deposits are estimated to be in a range similar to that of Lijiagou. Minco's second agreement with Baiyin covers the White Silver Mountain project

which surrounds polymetallic massive sulfide deposits near the city of Baiyin and includes the Xiaotieshan Mine. Minco can acquire an 80% interest in this project by funding all exploration work and completing a prefeasibility study. Xiaotieshan reportedly has reserves of 10.7 million tons at a grade of 5.1% zinc, 3.3% lead, and appreciable quantities of copper, gold, and silver. The infrastructure at Xiaotieshan includes a 1,500-ton-per-day lead-zinc concentrator, and a 50,000-ton-per-year lead and zinc smelter (Metal Bulletin, 1998b).

References Cited

American Metal Market, 1998, Asarco pares lead premium to 8 cents per pound:

American Metal Market, v. 106, no. 5, January 9, p. 16.
Metal Bulletin, 1998a, Falling prices force Faro to close: Metal Bulletin, no. 8246, January 22, p. 1.
———1998b, Minco Mining moves into China for two projects: Metal Bulletin, no. 8243, January 12, p. 6.
Platt's Metals Week, 1997, Fundamentals conspire to cushion lead prices: Platt's Metals Week, v. 69, no. 2, January 12, p. 2.
U.S. Consumer Product Safety Commission, 1998, Notice of approval of guidance document on lead in consumer products: Federal Register, v. 63, no. 14, January 22, p. 3310-3311.

TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES 1/

(Metric tons)

	1996	1997			1998
	Year total	Jan.	Dec.	Jan. - Dec. p/	Jan.
Production:					
Mine (recoverable)	426,000	36,700 r/	32,800	415,000	36,400
Primary refinery 2/	326,000	28,800	28,700	343,000	29,200
Secondary refinery:					
Reported by smelters/refineries	1,080,000	85,400	88,900	1,060,000	92,100
Non-reporting companies e/	--	1,390	1,500	17,700	1,600
Recovered from copper-base scrap e/	16,400	1,250	1,250	15,000	1,250
Total secondary	1,100,000	88,000	91,700	1,090,000	95,000
Stocks, end of period:					
Primary refineries 2/	XX	8,460	11,900	XX	13,000
Secondary smelters and consumers	XX	50,300	78,800	XX	61,600
Imports for consumption:					
Ore and concentrates (lead content)	6,570	4,520	--	17,800	NA
Refined metal	268,000	22,200	18,900	265,000	NA
Consumption:					
Reported	1,530,000	102,000	100,000	1,240,000	100,000
Undistributed e/	--	37,600	16,300	202,000	16,300
Total	1,530,000	139,000	117,000	1,440,000	116,000
Exports (lead content):					
Ore and concentrates	59,700	1,110	597	42,200	NA
Bullion	41,200 3/	4,010 3/	2,230	34,100	NA
Materials excluding scrap	60,700 r/	4,300 r/	3,110	53,300	NA
Ash and residues	19,400	2,080	668	16,800	NA
TEL/TML preparations, based on lead compounds	3,200	145	155	2,490	NA
Exports (gross weight): Scrap	85,300 4/	10,500	8,200	88,400	NA
Platt's Metals Week North American producer price (cents per pound)	48.83	48.56	45.26	46.54	45.20

e/ Estimated. p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Data from American Bureau of Metal Statistics, Inc. (ABMS).

3/ Previously included in "Materials excluding scrap."

4/ Includes only non-battery scrap data.

TABLE 2
MONTHLY AVERAGE LEAD PRICES

	North American producer price cents/lb	LME		Sterling exchange rate dollars/£
		\$/metric ton	£/metric ton	
1997:				
January	48.56	691.89	417.17	1.658514
October	46.19	599.80	367.30	1.633009
November	45.83	562.95	333.32	1.688906
December	45.26	526.19	317.04	1.659700
Year average	46.54	623.74	381.07	1.637978
1998:				
January	45.20	531.11	324.85	1.634960

Source: Platt's Metals Week.

TABLE 3
MINE PRODUCTION OF RECOVERABLE LEAD IN THE UNITED STATES 1/

(Metric tons)

	1997 p/			1998
	Year total	Jan. r/	Dec.	Jan.
Missouri 2/	400,000	35,500	31,900	35,600
Montana	9,200	798	445	524
Other States 3/	5,560	388	446 r/	285
Total	415,000	36,700	32,800	36,400
Daily average 4/	1,140	1,190	1,060	1,180

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Alaska and Missouri combined to avoid disclosing company proprietary data.

3/ Includes Colorado, Idaho, Illinois, New York and Tennessee.

4/ Based on number of days in period without adjustment for Sundays or holidays.

TABLE 4
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN JANUARY 1998 1/

(Metric tons, gross weight)

Item	Stocks Dec. 31, 1997	Net receipts	Consumption	Stocks Jan. 31, 1998
Battery-lead	27,100	87,600	87,100	27,700
Soft lead	W	W	W	W
Drosses and residues	2,090	4,160	4,180	2,070
Other 2/	2,460	3,090	2,680	2,870
Total	31,600	94,900	93,900	32,600
Percent change from preceding month	--	+2.6	+0.4	+3.1

W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

TABLE 5
REPORTED RECOVERY OF LEAD, TIN, AND ANTIMONY FROM LEAD-BA
SCRAP IN JANUARY 1998 1/

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	49,100	--	--
Remelt lead	W	W	W
Antimonial lead	37,600	13	W
Other 2/	W	W	--
Total lead-base	92,100	40	399

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits.

2/ Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 6
CONSUMPTION OF LEAD IN THE UNITED STATES 1/

(Metric tons, lead content)

Uses	1996	1997			1998
	Year total	Jan.	Dec.	Jan.-Dec. p/	Jan.
Metal products:					
Ammunition-shot and bullets	52,100	3,960	4,800	53,500	2,930
Brass and bronze-billet and ingots	5,460	549	514	6,190	508
Cable covering-power and communication and calking lead-building construction	W	648	407	5,520	438
Casting metals	18,800	42	398	5,200	448
Pipes, traps, and other extruded products	(2/)	(2/)	(2/)	(2/)	(2/)
Sheet lead	21,200	673	979	15,700	1,030
Solder	9,020	753	324	6,360	656
Storage batteries, including oxides	1,340,000	94,300	92,300	1,140,000	93,500
Terne metal, type metal, and other metal products 3/	9,560	198	161	2,420	198
Total metal products	1,460,000	101,000	99,900	1,240,000	99,700
Other oxides	(4/)	(4/)	(4/)	(4/)	(4/)
Miscellaneous uses	70,900	879	501	5,840	386
Total reported	1,530,000	102,000	100,000	1,240,000	100,000
Undistributed consumption e/	--	37,700	16,300	202,000	16,300
Grand total	1,530,000	140,000	117,000	1,440,000	116,000

e/ Estimated. p/ Preliminary. W Withheld to avoid disclosing company proprietary data; included with "Terne metal, type metal, and other metal products."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Withheld to avoid disclosing company proprietary data; included with "Sheet lead."

3/ Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

4/ Withheld to avoid disclosing company proprietary data; included with "Miscellaneous uses."

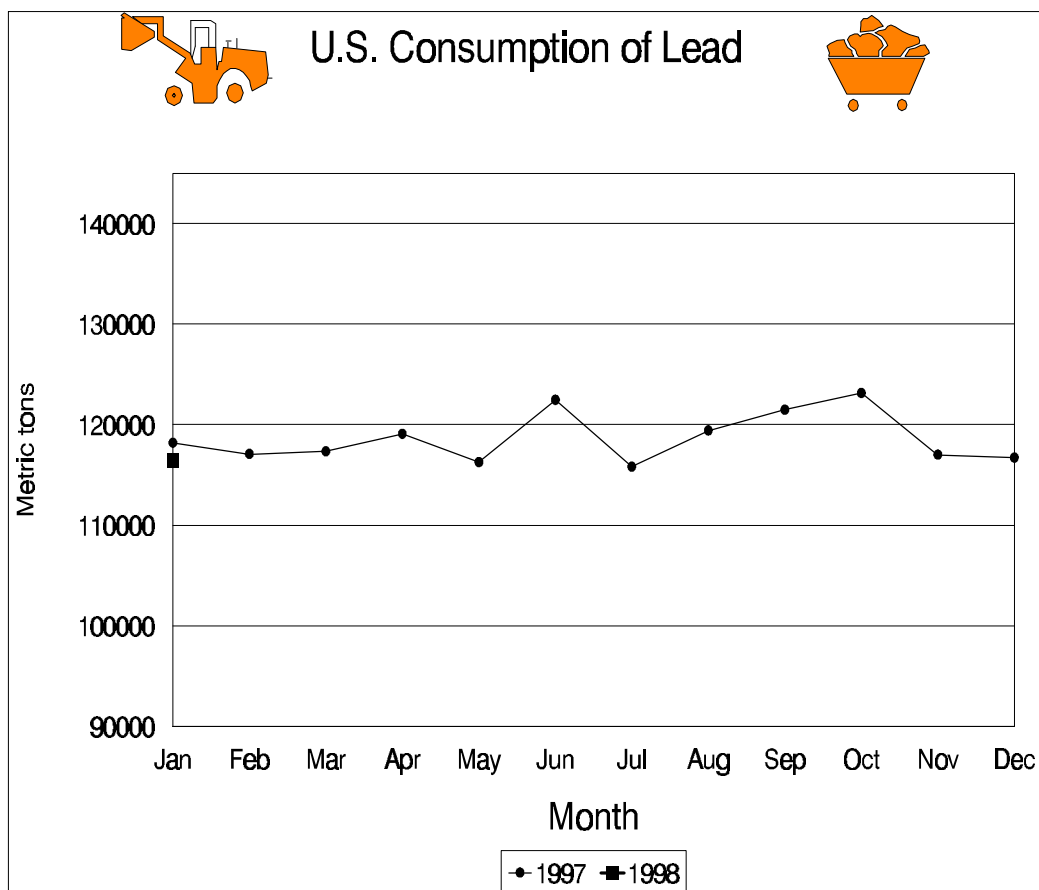


TABLE 7
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS, AND
CONSUMPTION OF LEAD IN JANUARY 1998 1/

(Metric tons, lead content)

Type of material	Stocks Dec. 31, 1997	Net receipts	Consumption	Stocks Jan. 31, 1998
Soft lead	39,100	37,100	52,100	24,200
Antimonial lead	31,300	29,700	29,700	31,300
Lead alloys	W	15,800	17,900	W
Copper-base scrap	W	398	401	W
Total	78,800	83,000	100,000	61,600

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 8
U.S. EXPORTS OF LEAD, BY CLASS 1/

(Metric tons)

	1996	1997		
	Year total	Nov.	Dec.	Jan.-Dec.
Lead content:				
Ore and concentrates	59,700	1,040	597	42,200
Bullion	41,200 2/	5,320 2/	2,230	34,100
Materials excluding scrap	60,700 r/	3,270 r/	3,110	53,300
Ash and residues	19,400	1,270	668	16,800
TEL/TML preparations, based on lead compounds	3,200	151	155	2,490
Total	184,000	11,000	6,760	149,000
Gross weight: Scrap	85,300 3/	8,520	8,200	88,400

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Previously included in "Materials excluding scrap."

3/ Includes only non-battery scrap data.

Source: Bureau of the Census.

TABLE 9
U.S. IMPORTS OF LEAD BY TYPE OF MATERIALS AND BY COUNTRY OF ORIGIN 1/

(Metric tons, lead content)

Country of origin	General imports				Imports for consumption			
	1996	1997		Year total	1996	1997		Year total
	Year total	Nov.	Dec.		Year total	Nov.	Dec.	
Ore, matte, etc.:								
Bolivia	326	--	--	1,120	--	--	--	--
Canada	352,000	10,400	26,400	96,500	4,370	--	--	753
Mexico	2,890	--	--	558	2,080	--	--	558
Peru	13,400	298	662	10,200	--	--	--	3,370
Other	133	3,830	--	22,300	122	--	--	13,100
Total	369,000	14,600	26,400	131,000	6,570	--	--	17,800
Base bullion:								
Canada	--	--	--	20	--	--	--	20
Mexico	5	--	--	5	5	--	--	5
Total	5	--	--	25	5	--	--	25
Pigs and bars:								
Belgium	11	--	--	47	11	--	--	47
Canada	192,000	15,600	12,700	186,000	192,000	15,600	12,700	187,000
Germany	338	--	--	401	338	--	--	401
Mexico	56,900	7,380	5,630	70,400	56,900	7,380	5,630	70,400
Peru	17,100	723	498	6,420	17,100	723	498	6,420
United Arab Emirates	160	--	10	72	160	--	10	72
United Kingdom	19	--	--	(2/)	19	--	--	(2/)
Other	846	19	30	1,100	846	19	30	846
Total	267,000	23,700	18,900	264,000	268,000	23,700	18,900	265,000
Reclaimed scrap, including ash and residues	192	6	--	68	192	6	--	68
Grand total	636,000	38,300	50,700	395,000	274,000	23,700	18,900	283,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.